



5. CORRIDOR DEVELOPMENT

This section discusses the steps and activities that will be required to develop the recommended corridors.

5.1 Steps Required for Pinal Corridors Development

While not explicitly spelled out in state statutes or ADOT policy, State Route designation by the State Transportation Board has historically made the route eligible for ADOT planning studies to develop, evaluate, and refine corridor alternatives and to resolve other planning issues to justify State Highway designation. Once designated as a State Highway, highway development is the responsibility of the ADOT Roadway Engineering Group. Highway development by the ADOT Roadway Engineering Group is carried out in accordance with the ADOT Policy and Implementation Memorandum 89-5 which contains procedures for scoping studies, feasibility studies, location and design concept studies, and environmental studies. These studies are requisites to the development of construction documents including plans, specifications, and cost estimates.

Based on a review of ADOT policies and procedures for highway development, development of the Pinal County Corridors recommended in the Corridor Definition Studies will require that the following reports and activities be performed.

- Feasibility Report The purpose of the feasibility report is to document project purpose and need, geometric issues, terrain issues, drainage issues, environmental issues, public and agency concerns which need to be addressed in a location/design concept report. A typical feasibility report requires data collection, agency coordination, public involvement, roadway alternatives development and evaluation, and an environmental overview.
- Location/Design Concept Report and Environmental Clearance The purpose of the location/design concept report is to address the issues and refine alternatives documented in the feasibility report and to evaluate roadway design concept alternatives. A typical design concept report requires preparation of engineering reports (such as geotechnical, traffic, drainage, structures, and AASHTO controlling design reports), the development of preliminary design plans, implementation plans, and cost estimates. Concurrent with the preparation of the location/design concept report, environmental clearance documents are required if Federal funds are to be used in highway construction. A typical environmental clearance document requires preparation of environmental reports (such as biological, cultural resources, air quality, noise, hazardous materials, and visual impact reports), and public involvement.
- Construction Plans, Specifications, and Cost Estimates—ADOT construction document preparation procedures advance the design concepts documented in the location/design concept report to construction documents which are requisite to acquisition of public rights-ofway required for roadway construction.
- Right-of-way Acquisition
- Construction

5.2 Funding Options

As illustrated by the estimates of probable cost presented in **Table 4-1** and **Table 4-2**, development costs for the North-South corridor are considerable. The cost to develop and construct the corridor may approach \$ 1 billion dollars. This section describes potential funding and financing options that have potential to be used on this project. Information on funding





sources was obtained from the *Pinal County Annual Budget* (2004-2005), *ADOT 5-Year Transportation Facilities Construction Program Fiscal Years* 2006-2010, 2002 *Arizona Transportation Factbook*, the ADOT Local Government Section, and ADOT Financial Management Section. Funding Sources are subcategorized by state, federal, local, and other sources.

5.2.1 State Funding Sources

This section addresses State of Arizona funding sources.

- The Highway Users Revenue Fund (HURF) Under provisions of Arizona Revised Statutes Title 28, Sections 6538 and 6540 and State Transportation Policy, Pinal County receives a portion of state revenues generated from motor fuel taxes and vehicle registration fees for the construction of controlled access freeways in the county. This is the primary source of funding for the Pinal County Public Works Department. The 2004 HURF fund distribution to Pinal County was \$11,515,102¹⁰.
- Local Transportation Assistance Fund These funds are proceeds from the Arizona state lottery and are distributed to incorporated cities, towns, and counties on the basis of population. The funds can be used for public transportation and transportation purposes depending on the jurisdiction's population.

5.2.2 Federal Funding Sources

This section discusses federal funding sources.

- National Highway System The National Highway System includes the Interstate Highway System as well as other roads important to the nation's economy, defense, and mobility. The National Highway System was developed by the US Department of Transportation in cooperation with the states, local officials, and metropolitan planning organizations. National Highway System funds can be used for construction, resurfacing, restoration and rehabilitation, and safety improvements of the National Highway System.
- Surface Transportation Funds (STP Funds) These funds are state flexibility funds for construction, reconstruction, rehabilitation, resurfacing, restoration and operational improvements. The local government roadway must meet the federal functional classification requirements and be included in the approved list of routes for the MPO or COG. Each MPO and COG has a list of approved roadways that are eligible for federal funds participation. STP projects are funded at 94.3% federal share and 5.7% local share. The current *ADOT Five Year Transportation Facilities Construction Program* lists four projects in Pinal County using STP funding, including two projects on US 60 and projects on SR 287 and SR 347.
- Congestion Mitigation and Air Quality Improvement Program (CM Funds) The Congestion Management System (CMS) is a federal requirement that is used in developing a Transportation Improvement Program (TIP). The CMS includes a qualitative policy element and a quantitative rating system for projects. The quantitative rating system includes factors related to congestion, multimodal evaluation, land use considerations and cost effectiveness. Transportation projects that are included as part of an approved State Implementation Plan (SIP) or Nonattainment or Maintenance Area Plan must be given the highest priority for CMAQ funding. CMAQ projects are funded

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¹⁰ ADOT Highway User Revenue Fund Fiscal Year 2004 Year End Report





at 94.3% federal share and 5.7% local share. Only a portion of the study area is within a non-attainment area. As such, CMAQ funds may not be available for development of the North-South corridor.

- Replacement and Rehabilitation Program (BR Funds) These funds are for the replacement of structurally deficient or functionally obsolete highway bridges or to rehabilitate the structural integrity of a bridge. Any bridge in the State that is included in the Statewide Inventory of Bridges maintained by ADOT and is inspected on a regular interval either by ADOT or the local jurisdiction, and has a sufficiency rating below 50, is eligible for Bridge Replacement funds. Bridges with a sufficiency rating above 50 qualify for Bridge Rehabilitation funds. Bridges with a sufficiency rating above 50 which are considered for replacement may be considered if the life-cycle analysis documents that it is more cost-effective to replace the bridge rather than rehabilitate it. Cost analysis for these bridges must be submitted to ADOT's Local Government Engineer for approval. All projects should be selected in accordance with requirements described in ADOT's Bridge Management Program. BR projects are funded at 80% federal share, 20% local share.
- Hazard Elimination System (HES) -This funding is for high accident location safety improvement projects in conformance with the Federal-Aid Hazard Elimination System (HES) and ADOT's Action Plan. Projects under this program are developed in a similar manner as other Federal-Aid highway projects. However, proposed projects will not be approved for Federal-Aid funding until they are evaluated by ADOT and the Federal Highway Administration (FHWA) and found to meet eligibility criteria.
- Railroad/ Highway Grade Crossing This federal program is available to improve highway safety at qualified public rail-highway grade crossing locations and is administered by the Arizona Department of Transportation (ADOT)'s Utility & Railroad Engineering Section (URES). Projects are 100% funded by the Federal Highway Administration.
- Transportation Enhancement Funds (TEA Funds) Provides funding for facilities such as pedestrian walkways and bicycle paths, acquisition of scenic easements, restoration of scenic or historic sites.

5.2.3 Local Funding Sources

This section discusses potential local funding sources.

- Bonds Issuing county bonds is a potential source of funding for transportation improvements. However, Pinal County's authority to issue bonds and the amounts and purposes for which bond funds can be used are limited by Arizona State Law and the County's internal financial policies.
- Pinal County Sales Tax according to the Pinal County Annual Budget for 2004-2005, County sales tax and state shared sales tax account for a large percentage of county revenues, and are subject to wide fluctuations based on economic conditions. Because of the variability of the sales tax revenues, the text of the Annual Budget states that it is good for smaller one-time capital purchases rather than major long-term or time sensitive purchases. However, this is an option that could be further explored.

5.2.4 Other Funding Sources

Toll Roads- Stakeholders have mentioned that development of the corridors as toll
facilities could be considered. Toll roads will be discussed in more detail in the Final
Report.





- Cost sharing with Developers, Private Contributions, or other municipalities—Based on agreements between Pinal County and public or private entities, cost sharing for the construction of road improvements is a form of financing that has been used by Pinal County on a number of projects. The Pinal County Five-Year Transportation Plan lists a number of road improvements where the cost was shared with builders, developers, or other jurisdictions. As an example, Pinal County has encouraged developers to contribute \$1,100 per home to the Superstition Valley Transportation Fund, the funds of which are paying for improvements to major arterials such as to Ironwood Road. Pinal County is currently considering an impact fee program.
- State Land Dedication Much of the land within the corridor definition is currently Arizona State Trust Land. Stakeholders have suggested that agreements could be developed in which right-of-way is dedicated by developers as part of an auction and purchase requirement. Alternatively, the Arizona State Land Department has indicated, as part of other unrelated development projects, that it may be possible to dedicate right-of-way if it can be demonstrated that dedication would increase the value of adjacent land such that it would cover the cost of the right-of-way.

5.2.5 Financing Options

This section discusses corridor financing options.

- HURF Bonds The State Transportation Board issues Highway User Revenue Bonds to accelerate the construction of highway construction programs throughout Arizona. The pledged revenues are the HURF funds deposited in the State Highway Fund.
- Highway Expansion and Extension Loan Program (HELP) Authorized by Congress in 1995, State Infrastructure Banks (SIB) operate much like private banks by providing financial assistance in the form of loans or credit enhancement for transportation projects. Arizona's SIB, the HELP fund, was established in 1998. In 1999, Senate Bill 1201 set total HELP funding at approximately \$370 million. STB is also authorized to provide loans from the HELP fund. Since 2000, the Accelerated Program has averaged approximately \$44 million a year in HELP loan funding.
- Grant Anticipation Notes (GANs) The State Transportation Board also has the authority to issue GANs which are notes backed by a pledge of future federal funds. This allows the state to use federal funds earlier and in advance of when they are actually earned, and thus allowing the state to start projects sooner. This practice of spending money not yet earned through the use of the GANs is both permissible and encouraged by Federal Highway Administration. Local Communities participate in paying the cost of interest on the notes.
- Board Funding Obligations (BFOs) The State Transportation Board has the authority to issue non-negotiable Board Funding Obligations for purchase by the Arizona State Treasurer. In addition to capitalizing Arizona's State Bank (used for funding HELP Loans), the Board can issue BFO's for the State Highway Fund.
- Transportation Infrastructure and Innovation Act (TIFIA) This new federal program consists of three types of financial assistance, including secure loans, loan guarantees, and standby lines of credit. Under TEA-21, the projects must qualify under Title 23.

5.3 Review of Arizona Statues, ADOT Policies, and System Criteria for State Highway System Designation

A stated objective of the Pinal County Corridor Definition Study is to provide recommendations for jurisdictional responsibilities for recommended corridors. This section presents criteria for





evaluating routes that may qualify for inclusion on the state highway system. It discusses relevant state statutes, as well as State Transportation Board (Board) policies.

5.3.1 Arizona Revised Statutes

This section presents a review of Arizona Revised Statues as they pertain to the designation of state highways.

5.3.1.1 State Highway and State Route Definition

Definitions for state highways and state routes are provided in ARS 28-101, Definitions, and ARS 28-7041, State Highways and Routes Defined. In particular, ARS 28-7041 is a key legislative statute to reference for this analysis. It is provided in its entirety as follows (bold and italics were added to highlight areas that refer to the process for designating a state highway and the requirements for a state highway). Key elements of Statute 28-7041 include the requirement that a road must be recommended to the Board by the Director of Transportation to be designated a state highway, and (in item B) a state highway must first be designated as a state route.

These statutes are provided as follows:

28-101. Definitions

- 49. "State highway" means a state route or portion of a state route that is accepted and designated by the board as a state highway and that is maintained by the state.
- 50. "State route" means a right-of-way whether actually used as a highway or not that is designated by the board as a location for the construction of a state highway.

28-7041. State highways and routes defined

- A. The state highways, to be known as state routes, consist of the highways declared before August 12, 1927 to be state highways, under authority of law, *that the board, after receipt of a recommendation from the director, may add to*, abandon or change. If the board proceeds contrary to the recommendations of the director, it shall file a written report with the governor stating the reasons for the action.
- B. The state highways consist of the parts of the state routes designated and accepted as state highways by the board. A highway that has not been designated as a state route shall not become a state highway and any portion of a state route shall not become a state highway until it has been specifically designated and accepted by the board as a state highway and ordered to be constructed and improved.
- C. All highways, roads or streets that have been constructed, laid out, opened, established or maintained for ten years or more by the state or an agency or political subdivision of the state before January 1, 1960 and that have been used continuously by the public as thoroughfares for free travel and passage for ten years or more are declared public highways, regardless of an error, defect or omission in the proceeding or failure to act to establish those highways, roads or streets or in recording the proceedings.





5.3.1.2 Responsibility of the State Transportation Board to Designate a State Highway

Statute 28-304 section B defines the powers and duties of the State Transportation Board regarding establishing a state highway system. A partial excerpt of this statute is provided as follows:

28-304. Powers and duties of the board; transportation facilities

- B. With respect to highways, the board shall:
- 1. Establish a complete system of state highway routes.
- 2. Determine which state highway routes or portions of the routes are accepted into the state highway system and which state highway routes to improve.
- 3. *Establish*, open, relocate or alter a portion of a state route or *state highway*.
- 4. Vacate or abandon a portion of a state route or state highway as prescribed in section 28-7209.
- 5. Sell board funding obligations to the state treasurer as provided in section 28-7678.

5.3.1.3 Process of Designating a State Highway

The process of transferring a state route to a state highway is further defined in Statute 28-7043. Statute 28-7043 provides for noticing requirements for the affected county to participate in the State Transportation Board meeting and have their opinion heard regarding the designation of state route to a state highway. The statute also states that a state route should not be designated as a state highway until monies for its improvement are provided in the budget of the department.

28-7043. Designation of state route as state highway

- A. At least two weeks before the designation and acceptance by the transportation board of a state route or portion of a state route as a state highway, the transportation board shall give notice to the board of supervisors of the county in which the proposed highway is located of the intention of the transportation board to consider the designation.
- B. The board of supervisors may:
- 1. Appear before the transportation board and be heard on the proposal.
- 2. Petition the transportation board to take over and designate a state route as a state highway.
- C. *Until designated and accepted as state highways, all state routes are county highways* and shall be constructed, improved and maintained as county highways, except as otherwise provided in this title.
- D. A part of a state route shall not be taken over or designated as a state highway until monies for its improvement are provided in the budget of the department. If part of a state route is designated and accepted by the transportation board as a state highway, the department shall maintain the highway.





ARS 28-7046 states that the Director must deliver a written report to the State Transportation Board to establish a state highway, and that the Superior Court may review the action of the State Transportation Board.

28-7046. Opening, altering or vacating highway; review of order

A. If the director or the board desires to *establish*, open, relocate, alter, vacate or abandon a state highway or a portion of *a state highway*, *the director shall make* and deliver a written report to the board describing the highway or portion of the highway to be affected. If the board decides that the public convenience will be served, it shall enter a resolution on its minutes approving the proposed action and authorizing the director to proceed and to acquire any property for the action by condemnation or otherwise.

B. The *superior court may review by certiorari the action of the board* establishing, opening, relocating, altering, vacating or abandoning state highways.

ARS 28-7049 defines the criteria of connectivity for state highways that involves forming necessary or convenient links to connect sections of state highways or state routes, or for carrying state highways through cities and towns.

28-7049. Classification of streets that connect highways and routes

A. If the streets of an incorporated city or town form necessary or convenient links for the connection of sections of state highways or state routes, or for carrying the state highways or state routes through the city or town, the director and the governing body of the city or town, in the case of state highways, or the board of supervisors and the governing body of the city or town, in the case of state routes, may agree that the streets are deemed state highways or county highways, respectively.

B. The agreement shall provide for maintenance of the streets classified pursuant to this section.

5.3.2 State Transportation Board Policies

The State Transportation Board has broad authority to plan and develop Arizona's highways, airports, and other state transportation facilities. In addition to these general policy responsibilities the Board is responsible for development and oversight of the State's Five-Year Transportation Facilities Construction Program and for policy and rule-making in the following areas:

- Priority Programs
- Establishing, altering or vacating highways
- Construction contracts
- Accelerated funding mechanisms
- Local government airport grants
- Designating or establishing scenic or historic highways

State Transportation Board Policies 5 and 16 serve as criteria for establishing state highways. Key phrases in the policies that serve as criteria are highlighted and bolded. Policy 5 highlights the need for state highways to provide connectivity between population centers and to interconnect with those of other states. Policy 16 highlights the need to provide a statewide network to serve the movement of goods and people.





Policy No. 5 - State Highway System Priorities Policy

- 1. It is the policy of the Board to implement Arizona's vision for an integrated statewide transportation system by placing priority on state highways that:
- Connect Arizona's regions and population centers by an efficient network of highways to carry travelers and commerce throughout the state;
- Connect Arizona, its regions and population centers with other states and Mexico; and
- Connect major population centers and through routes within urban areas with high volume routes that increase mobility of people and goods.
- 2. Consistent with these priorities, the State Highway System should include *routes primarily designed to carry through traffic*, including:
- Interstate Highways;
- Other arterial routes connecting Arizona's population centers and interconnecting with those of other states; and
- High capacity connecting routes needed to form an efficient network.

Policy No.16 - Transfer of State Routes Policy

16.1. states that "It is the policy of the Board that the State Highway System consist primarily of routes necessary to provide a statewide network to serve the ever changing environment with regards to statewide and regional movement of people and goods. Routes primarily providing land access and local movement of people and goods should be the responsibility of local governments. The Transportation Board will seek to transfer these routes to other jurisdictions."

5.3.3 State Highway Criteria from ADOT Route Transfer and Level of Development Study

Another source of criteria for state highways is the *Route Transfer and Level of Development Study*, (2004) prepared by HDR and Kimley-Horn for the Arizona Department of Transportation. As part of this study, criteria for inclusion of a road on the state highway system were developed for functional categories of state highways. These criteria are summarized in **Table 5-1**.





Table 5-1 – State Highway Criteria from Route Transfer and Level of Development Study

Facility	Definition	Classification Criteria
Freeways	Interstate and urban controlled access facilities designed for high volume, high speed and full access control.	 Designated as Interstate Highway or Urban freeway
Other Major Facilities	Other major facilities serving significant auto or truck traffic forming a network of high capacity routes for long-distance travel. In rural areas they are designed for high speeds and continuous flow. In urban areas they are designed and maintained for continuous flow with minimal interruptions. Where volumes exceed 5,000 average daily traffic (ADT), designs are often multi-lanes with expressway characteristics	 Rural routes with more than 5,000 ADT Connecting rural National Highway System (NHS) routes with more than 1,500 ADT Key freight routes (more than 1,000 articulated trucks per day) Urban and rural connecting routes to form a network in which Other Major Facilities routes connect at both ends to Freeways or other Major Facilities routes
Other Statewide Routes	Other statewide routes providing for long distance travel and regional links through urban areas. These roads contain the majority of miles on the highway system, filling the network to provide access to all areas of the state. In rural areas they are generally higher speed routes, although with more variation in speed than would be acceptable on the "other major facilities" category. In larger urban and suburban areas they are designed for continuous flow, but with more interruptions than being acceptable for the "other major facilities" category.	 Rural arterial and major collector routes with more than 1,500 ADT Urban arterial routes with more than 5,000 ADT Connecting routes necessary to form a network in which all other statewide routes connect with Freeways, Other major facilities or other statewide routes Not including business routes and other routes with parallel state highways of higher classification
Non-statewide routes serving points of state and National interest	Lower volume rural routes connecting facilities or regions of statewide significance. These routes are expected to stay on the state system because they serve significant state or national facilities, including national parks and monuments and institutions such as prisons and major research centers. However they do not handle significant volumes of through traffic and are not a significant part of the state system.	 Routes that would normally be classified as a route without statewide significance but serves a state or national facility Provide only access to a large population or land area.

5.3.4 Summary of Criteria for a State Highway Designation

Based on the policies defined in the previous sections, a list of criteria was developed to determine if the North-South Corridor could meet the criteria to be defined as state highways. These criteria can be answered by the questions posed in **Table 5-2**.





Table 5-2 - North-South Corridor Criteria Satisfcation for Designation as State Highway

Criteria for Designation as State Highways	Degree to which North-South corridor Meets Criteria
Has this road been designated as a state route? If yes, what are the specifics of the route designation? (Per ARS 28-101, 28-7041)	No, the corridor has not been designated as a state route.
2. Does this road form a convenient or necessary link for connecting sections of state highways or for carrying state highways or state routes through cities or towns? (Per ARS 28-7049).	Yes. The North-South corridor would connect SR-287 (a state highway) or SR-79 (a state highway) to Williams Gateway Corridor and Loop 202 through the towns of Florence, and unincorporated Pinal County. The North-South corridor would relieve a significant amount of through traffic currently traveling through the Town of Queen Creek. Other north-south links between SR-79 and Loop 202 are not planned to be access controlled.
Is this route primarily designed to carry through traffic? (Per State Transportation Board Policy No. 5).	Yes, as it is being proposed, the corridor would be a 6-lane access controlled facility. Future traffic volumes vary between 30,000 and 140,000 vehicles per day, indicating that the route will serve both through trips and local trips.
4. Does this route connect Arizona's population centers? (State Transportation Board Policy No. 5)	Yes, the North-South corridor would connect emerging population centers in Florence and Coolidge to employment centers in Williams Gateway area and to the Phoenix metropolitan area.
Does this route interconnect with those of other states? (State Transportation Board Policy No. 5)	No, the North-South corridor will not interconnect with state highways of other states.
6. Is this route a high capacity connecting route needed to form an efficient network? (State Transportation Board Policy No. 5)	Yes, future traffic volume projections indicate this will be a heavily used route. It is needed to form an efficient network because of its north/south connectivity. This facility would be the only fully access controlled facility in northeast Pinal County.
7. Does this route provide statewide and regional movement of people and goods? (State Transportation Board Policy No. 16)	Yes, this facility will provide regional movement of people and goods by providing a regional route connecting from SR-79 or SR-287 to the Loop 202. It will serve statewide travel because it will better interconnect northern Pinal County with southeast Maricopa County.
8. Designated as Interstate Highway or Urban freeway? (Per Route Transfer and Level of Development Study).	No, the North-South corridor is not currently designated as an interstate highway or urban freeway though such designation may be considered in the future.
9. Does this route meet criteria for "other Major facilities" includes (Per Route Transfer and Level of Development Study).	Yes, the North-South corridor meets the fourth (bullet) criteria because it (if developed) would be an urban connecting route which forms a network at both ends to a state highway, because it connects to SR-79/SR-287 and Loop 202.
Rural routes with more than 5,000 ADT	
 Connecting rural National Highway System (NHS) routes with more than 1,500 ADT 	
 Key freight routes (more than 1,000 articulated trucks per day) 	
 Urban and rural connecting routes to form a network in which Other Major Facilities routes connect at both ends to Freeways or other Major Facilities routes 	





5-2 - North-South Corridor Criteria Satisfaction for Designation as State Highway (continued)

Criteria for Designation as State Highways	Degree to which North-South corridor Meets Criteria
 10. Does this route meet criteria for "other statewide routes" includes (Per Route Transfer and Level of Development Study). Rural arterial and major collector routes with more than 1,500 ADT Urban arterial routes with more than 5,000 ADT Connecting routes necessary to form a network in which all other statewide routes connect with Freeways, Other major facilities or other statewide routes Not including business routes and other routes with parallel state highways of higher classification 	Yes, if developed, the corridor is projected to carry 30,000 vehicles per day at the south end of the corridor and nearly 140,000 vehicles per day at the central and northern portions of the corridor. It will form a network connecting SR-79/SR-287 to the Loop 202. This corridor may be considered, in some segments, as a parallel route to SR-79.
11. Does this route meet criteria for "Non-Statewide routes" serving points of state and national interest (Per Route Transfer and Level of Development Study).	Yes, this route may serve points of state and national interest including the Arizona Department of Corrections facilities located on SR-79.